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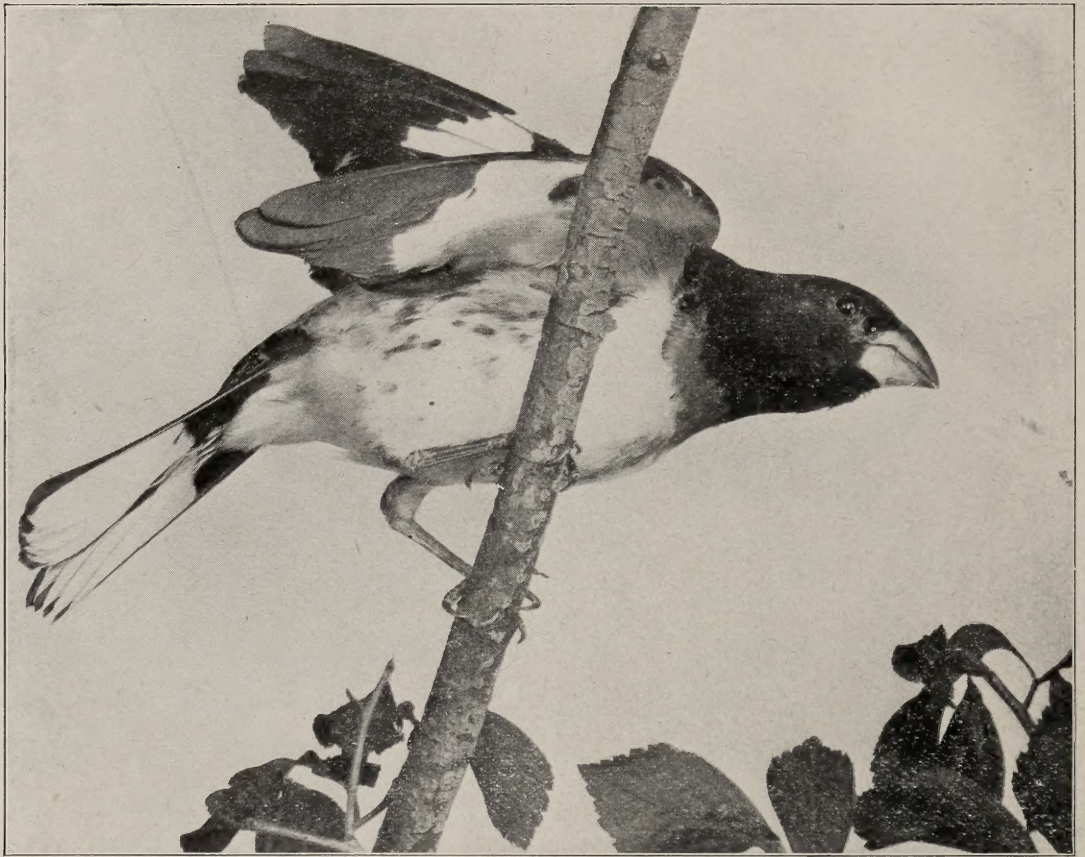
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Articles of general interest relating to the bird life of the Great Lake Region are solicited. They should be in the hands of the editor not later than the 20th of the month preceding publication.

FEB 8 1922



Rose-breasted Grosbeak (*Zamelodia ludoviciana*)

FROM SPECIMEN MOUNTED BY A. B. COVERT

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Nos. 1 & 2.

A HYPERLAKEN MIGRATION ROUTE.

BY P. A. TAVERNER.

On going over some extra-limital records and comparing them with those of this state I was lately much struck with the peculiar cases of distribution thus brought to light. The species in question are all western or northwestern breeding forms regularly migrating up and down the Mississippi Valley, though straggling eastward in some cases, even to New England. It is to these stragglers and their peculiar distribution that I wish to call attention.

On comparing various lists of the country about the Great Lakes it immediately strikes the attention that southeastern Ontario is more than usually well supplied with these rare forms, and from the comparative numbers of such, it is evident that this section of Canada is more closely related, ornithologically, with the Prairie Regions of the northwest than its relative position on the map would lead one to suppose. The city of Toronto and its immediate vicinity is especially so favored and some most astonishing records have been made within the city limits.

Michigan, on the contrary, is surprisingly lacking in these forms, as are those parts of Ohio and Indiana lying immediately to the south. Considering that this state is several hundreds of miles nearer the natural range of these birds than Toronto, it is evident that this steady drift of accidental visitors to the shores of Lake Ontario and their regular avoidance of this state cannot be due to mere chance. The records cover a number of years and can hardly be due to any temporary set of meteorological conditions, for though a storm might once in a while blow birds from, say, Wisconsin clear over this state into the middle of southern Ontario, such could not happen very often without depositing more of its flotsam and jetsam upon our own state than appears to be the case.

In the following annotated list of the birds under discussion I have taken advantage of the following authorities: Kumlien & Hollister's Birds of Wisconsin; Butler's Birds of Indiana; Lynds Jones' Birds of Ohio; Clyde Todd's Birds of Erie, Presque Isle Co., Pa.

For my Michigan records I am indebted to Mr. N. A. Wood and the collections of the Museum of the University of Michigan and especially to Prof. W. B. Barrows, of the Agricultural College, who has rendered me great aid in advice from the materials he has gathered for his forthcoming list of the birds of Michigan.

My Ontario records have all been verified by Mr. J. H. Fleming, of Toronto, whose work in eliminating and substantiating the various records for his Province has rendered his aid invaluable.

It is much to be regretted that our records are not fuller in various sections. The whole north shore of Lake Superior and Huron seem ornithologically a *terra incognita* and the amount of careful work in the Northern Peninsular leaves much to be desired. The one season's work done at Isle Royal by the University of Michigan Survey is hardly enough to do more than raise interesting suggestions without furnishing data enough to satisfy the interest thus awakened. Until more information is gathered many of the following conclusions can only be regarded as tentative and advanced more to awaken interest in the problem than as final and absolute conclusions.

AMERICAN AVOCET.

Habitat—United States and British Province. Rare now in Eastern United States. Only occasional in New England. Abounding in the West, especially in the alkaline regions as those of the Milk River, Yellowstone, Utah, etc.

Wisconsin—considered exceptionally rare—5 records.

Indiana—Rare migrant—1 record for Indiana—Calumet Lake.

Michigan—No records.

Ohio—1 Cincinnati; 1 St. Mary's Reservoir; 1 Cleveland; 1 Lebanon Reservoir.

Ontario—Three individuals taken at Rondeau at different times; 2 specimens, Toronto, June and fall.

SNOWY PLOVER.

Habitat—Chiefly west of Rocky Mountains, Utah, California Coast; breeding and wintering; also coast of Texas.

Wisconsin—No record.

Indiana—No record.

Michigan—No record.

Ohio—No record.

Ontario—2 records, Toronto.

WESTERN RED-TAILED HAWK.

Habitat—Western United States at large, particularly United States from Rocky Mountains to Pacific.

Wisconsin—Of but rare occurrence.

Indiana—No records.

Michigan—No records.

Ohio—1, Franklin Co.

Ontario—1, St. Thomas; 1, Toronto.

SWAINSON'S HAWK.

Habitat—Western North America from Wisconsin, Illinois, Arkansas and Texas to the Pacific Coast; north to arctic regions; south to Buenos

Ayres; casually east to Massachusetts.

Wisconsin—Not uncommon—20 records cited and more inferred.

Indiana—No records.

Michigan—1 Hillsdale Co.; 1 Ann Arbor; 1 Genesee Co.; several Wayne Co.

Ontario—3 specimens for Toronto.

Quebec—A few examples taken.

AMERICAN MAGPIE.

Habitat—Northern and Western North America; casually East and South to Michigan (accidental in Northern Illinois in winter) and the plains, and in the Rocky Mountains to New Mexico and Arizona.

Wisconsin—6 birds recorded.

Indiana—No records.

Michigan—Of doubtful occurrence in state—no records.

Ohio—No records.

Ontario—1 Port Sidney; several Kingston; - Odessa; common resident Copper Cliffs, Lake Superior.

LECONTE'S SPARROW.

Habitat—Prairie marshes of Mississippi Valley and Central British Province. Breeding from Minnesota (N. and W.), Illinois, South Dakota, etc., to Assinaboia and Manitoba; in winter south to Gulf States and Coast of South Carolina.

Wisconsin—Irregularly and locally very common.

Indiana—A dozen or so in west central Indiana.

Michigan—One record, Ann Arbor.

Ohio—No record.

Ontario—1 Toronto.

NELSON'S SPARROW.

Habitat—Manitoba and the Dakotas, Minnesota, western Wisconsin, Nebraska and Iowa and northern Illinois. South in winter to the Gulf States.

Wisconsin—Last 12 years exceedingly abundant about Lake Koshkonong.

Indiana—Observed in northwestern part of state.

Michigan—One record for Wayne Co.

Ohio—One record for extreme northeastern corner of state.

Ontario—About 10 records for Toronto.

Pennsylvania—Common fall migrant, Erie, Presque Isle Co.

From the above records it will be seen that many of these species are more or less common migrants and residents through Wisconsin and northern Illinois. Also that northwestern Indiana gets a considerable number and northeastern Ohio a few, while the space between these two latter points is almost barren of them. The Lower Peninsular of Michigan has very few records, and most of them are in the southeastern corner of the state. For the Northern Peninsular, as I said before, our records are rather scanty, but what we have indicate a dearth of these northwestern forms just where we would expect to find them more plentiful.

It seems evident then, that these birds do not cross Michigan to reach southeastern Ontario, and another route must be sought for. As there is

no indication of the birds across Indiana and Ohio they must take a hyperlaken route along the north shores of Lake Superior and Huron, around the great indentation of Georgian Bay and then south to Lake Ontario. This would bring them directly to the Toronto locality where so many specimens have been taken.

From the eastern corner of Georgian Bay there springs a great water system, extending down via Lakes Muskoka, Couchaching and Simcoe and the Holland, Don and Humber Rivers directly to the city of Toronto, and offering what seems, if our present ideas are correct, an ideal migration route. That this latter part of the way is a natural highway of communication and something more than a chance connection of small streams is evident when we remember that it was the old Voyageur and Indian route and later the military highway to and from Fort York and the upper posts of the Great Lakes.

That Toronto lies right in the path of a strong migratory movement no one who has collected or observed there will doubt. Spring and fall there is a great massing of bird life at this point, both of species and individuals, that can be explained in no other way. Probably in no other like locality can as many birds be seen at times as here, except perhaps the classic valley of the Connecticut River. Nor does the line of densest population appear very wide. Many birds are common and regular on Toronto Island that are rarely met with elsewhere in the Province.

By this same token it would appear that the route lies directly across Lake Ontario from here, for any pronounced movement along the shore would have been noted, especially if it led around the most obvious end of the lake, viz., the western, for Hamilton has been a well watched station for years and from the work of Mr. Thos. McIlwraith is one of the classic spots of Ontario ornithology.

This slow but steady drift of straggling birds about the north end of the larger of the Great Lakes indicates something more than accidental wanderings. It points to peculiar conditions that naturally direct these forms along such a course. According to a high authority such bodies of water should have but a slight effect on the direction of migration, but the facts of these cases lead to a different conclusion. It is interesting in this connection to observe that with one exception the winter ranges of these birds lie entirely within the boundaries of the United States or northern Mexico and that on their normal migration no necessity occurs to cross the broad waters of the Gulf of Mexico. In the cases of such birds, unaccustomed to sustained flight across large bodies of water, we can readily understand why they should hesitate to cross the expanses of the Great Lakes. Other species habituated to such passages and perhaps better provided with powers and instincts for it would venture boldly across, but none of these occur in the above list. The fact is suggestive and it is evident that the Great Lakes do form serious deflectors to the current of the migration of at least these species.

I do not think I can be seriously charged with jumping at conclusions if I infer from these straggling wanderers a much more pronounced movement in other forms along the same lines. In fact it appears likely that,

knowing the gregarious instincts of birds during migrations and how often we find little groups of different species migrating together, that birds having lost their way and filled with the unrest of the migration season, would attach themselves to some such group or groups and with them appear in localities that alone and unguided they would never have found. Should the new habitat be congenial we should expect them to return over the same route unless they fell into the company of others of their kind and with them travel along the normal route of their species.

Such at least appears to be the natural explanation of the phenomena under discussion and a glance at the map will show how feasible such a route is. From a point on the north shore of Lake Superior just east of the Nipigon the most natural way south without crossing the Greater Lakes would be just such a route as I have mapped out. Many undoubtedly cross to the Upper Peninsular at the Sault and come down the western shores of Lake Michigan through the lake counties of Wisconsin, but no conclusive data on this movement are to be had for reasons given before. That none or but very few of these species continue across the straits of Mackinac and down through the Lower Peninsular is, however, quite evident.

Certain facts gathered by the Isle Royal Survey seem to indicate a possible migratory movement of some species across Lake Superior from that Island to Keweenaw Point, but that is only conjectural as yet and at any rate the data do not warrant applying it to the species under consideration.

Nelson's Sparrow is an interesting example of a bird following this hyperlaken route and the case is typical and well marked. This species appears as a regular fall migrant at Erie, and spreads irregularly through the Atlantic states from North Carolina even up to Maine. It would seem as though this was a case where an accidental movement had been fixed as a permanent habit by the continued success of the species concerned and gives us a hint of some of the factors that must be taken into consideration when we attempt to follow out Palmen's law of migration in all cases. Should the original stock from which these Erie birds have sprung, from causes anywhere along their regular habitat, become extinct, these stray individuals might still survive, and with their strange migrations offer a most perplexing problem to some future student.

It is always unpleasant to hear a friend's name mispronounced, but in many cases the offender has no possible way of knowing better. Therefore it may be of interest to some to know that Dr. Coues always pronounced his name is spelled "Cows," and Dr. Stejneger is called either "Stenneger" or "Stynegar" with the accent on the y—probably the latter is most nearly correct. Bendire is pronounced Bendyre not Bendear; and the late Percy Selous, an Englishman, pronounced his name Say-loó, as if French.

THE OCCURRENCE OF BEWICK'S WREN, *Thryomanes bewickii* (Aud.), AT GRAND RAPIDS.

BY LEON J. COLE.

There are a number of birds which are interesting to Michigan ornithologists on account of the northward extension of their range in this State within a comparatively few years. As striking examples may be mentioned the Cardinal and Dickcissel, probably the Carolina Wren, and undoubtedly Bewick's Wren should be added as another.

Butler, in his 'Birds of Indiana' (22d Report of the Department of Geology and Natural Resources of Indiana, 1897) gives a good record of the progress of this bird through Indiana, so that, as it fortunately happens, we are able to trace the successive steps to the northward of the Ohio River with considerable fullness. It is to be regretted, however, that the records are not much more complete than they are; for in that case it might be possible to trace the exact lines along which the extension has taken place, if, as seems very probable, it has occurred in such a regular manner. To show the course through Indiana I cannot do better than quote the words of Butler (loc. cit., p. 1117): " . . . The recent extension of the range of this species is notable. In 1879 Dr. Wheaton announces it had not been authentically reported from Ohio (Birds of O., p. 230); it was unknown to him that Mr. Chas. Dury took it that year at Cincinnati. It was almost wholly unknown in Franklin County, Ind., until recent years. In 1869 Dr. Rufus Haymond had seen but a few specimens. None were noted from that year until 1877, when Mr. E. R. Quick identified several specimens. From that date to 1881, an occasional one was seen. Since the last mentioned year, however, when they became common, they have been annually increasing in number, and now they are abundant. The spring of 1897, I found six pairs breeding in an area of one-half mile by a mile, in Brookville. Up to 1890 it had reached Vigo and Putnam counties, where it was rather common, and had been reported from Marion County. North of the points named it was unknown.

"It was first noted at Lafayette in 1890, where a pair bred (Dr. F. C. Test), and they became common in 1892 (L. A. and C. D. Test). They were first reported from Wabash in 1891, and were common in 1894 (Wallace). One was seen at Springport, Henry County, April 29, 1894 (Williamson). They were first reported and said to breed at Petersburg, Mich., May 15 and 16, 1894. They were still rare there in 1897 (Trombley). The first record from Richmond, Ind., is in the spring of 1897, and it is given as rare (Hadley). . . . "

Here there seems to be some evidence to indicate two lines of progression, one from the region of Cincinnati up the valley of the White Water River, the other up the valley of the Wabash; and it probably is by this latter route that the birds have come into Michigan. It must be remembered, however, that as in the case of all similar observations, the distribution of records is largely dependent upon the distribution of field observers.

Butler states it as his belief that the species is extending its range of winter residence northward as well, and that north of that limit the date of its spring migration is becoming earlier. He gives some data in support of this view, which seems quite to be expected.

It will be noticed that, upon the authority of Trombley, Butler reports this wren from Petersburg, Michigan, in 1894, adding that it was still rare

there in 1897. The year 1894 is not the earliest record for that locality, however, for in Cooks 'Birds of Michigan,' published in 1893 (p. 142), Mr. Trombley is quoted as saying that it is a "summer resident in Monroe Co., where it has nested three years in a bird box, identification certain;" which would mean that he first noted it in the summer of 1891. In his list of the birds of Washtenaw County, published in 1881, Covert records a single specimen which antedates the above record by 13 years.¹ It has not, to my knowledge, been observed in that county since that time, and the record was very unusual, since at that date it had not been authentically reported from Ohio, and was not known in Indiana north of Franklin County, in the southeastern part of the State. Dr. Morris Gibbs states that it is "rare, but several taken in Kalamazoo County;" but no dates are given.²

In the spring of 1894 I had an excellent opportunity to observe a pair of Bewick's Wrens at Grand Rapids. I was not then acquainted with the bird, and no specimen was secured; but my description, written at the time, leaves no doubt of its identity. My first notes were written on May 5 of that year, when a single bird was observed carrying nesting materials to a cigar box which has been nailed to the inside wall of a shed in my yard, with a small hole leading to the exterior. The nest-building was carried on in a rather desultory way until the 16th, and never in this interval did I see more than the one bird, which I took to be a male. Much of his time was spent in singing and in flitting about in a small pile of lumber near by. For the nest he appeared to gather grass, bark from neighboring grape vines, and also employed to a small extent some strings and pieces of cotton that I laid out for that purpose. I have no good record of the song, but I take the following from my notes: "His usual song is short, but very pretty; and although it is not much like that of our common wren [House Wren] it resembles it in being slow at first, and more rapid near the close. He has many other songs [variations, it might perhaps better have been said], one of which is like the one described, only more slow throughout."

On May 16 two birds were seen, and it appeared to me from their actions that the one that had built the nest was attempting to coax the other bird to it. They were much annoyed during the day by a male Bluebird whose mate was sitting on five eggs in a bird house but a short distance away, and were frequently forced to retire into the lumber pile to avoid his attacks. Whether for this reason, or whether for some other less apparent I do not know, but greatly to my disappointment both birds disappeared on that day, and I did not see either of them again.

The nest I saved in its box, and it is now deposited in the Museum of the University of Michigan. I had made no description of the nest, and at my request Mr. Norman A. Wood has kindly sent me the following: The nest is in a box $6\frac{1}{2} \times 4\frac{1}{2}$ inches, $3\frac{1}{4}$ inches high, and occupies about one-half of the space in the box. The foundation, or base, of the nest, is composed of

¹Covert, A. B., "Annotated List of the Birds and Mammals of Washtenaw County, Michigan" (extracted from the "History of Washtenaw County"), March, 1881, p. 176: "*Thryothorus bewickii*.—Bewick's Wren. But one specimen of this bird has been shot in this county to my knowledge (a male, June 3, 1878). This is also referred to by Ridgway, "The Birds of North and Middle America," Part III., 1904, p. 554 (Bulletin 50, U. S. National Museum).

²Cook's "Birds of Michigan," p. 142. In his "Annotated List of the Birds of Michigan" (Bull. U. S. Geol. and Geogr. Survey, Vol. V., No. 3, pp. 481-497, 1879), Gibbs states for Bewick's Wren (p. 483): "Rare; only a few taken in spring."

roots of bushes and weeds, a *few* sticks, and a string about a foot long. The rest of the nest is made of fine rootlets, and with them is a little wool or cotton [cotton, see above]; this is built up to form a rim, making a cup-shaped interior 2 inches in depth and diameter. The nest is at the end opposite the entrance, which is $1\frac{1}{4}$ inches square, and a few of the roots extend to this entrance.

During the same spring, 1894, I heard birds which I took to be Bewick's Wrens singing at one or two other places in the city, but did not see any of them. Whether my birds returned in 1895 I am unable to say, as I was away that year; but I am certain that they were not in the same neighborhood, at any rate, in the seasons of 1896 and 1897.

With the exception of Mr. Trombley's records from Petersburg, I am not aware that this wren has been reported in Michigan since 1894. I should urge upon the members of the Michigan Ornithological Club, therefore, that during the present season especial care be taken to establish definitely its distribution in the State. Wherever it occurs in the northernmost part of its range, it appears to be extremely local, and should be looked for with care.

NESTING OF THE WOODCOCK.

BY GERARD ALAN ABBOTT.

[With pictures from Photographs by Robert Hegner.]

I spent six years looking for woodcock nests before success crowned my efforts, although my search was confined to the same territory that proved so productive in later seasons.

April 28th, 1901, while beating through a willow copse, I found among the leaves on a little knoll the remains of four eggs of *Philohela minor*, from which the young had just emerged. This discovery, though not productive of immediate results, furnished an inside track, which in turn led directly to success.

April 13th, 1902, with a companion, I revisited the willow copse, previously mentioned, and found four fresh woodcock eggs within fifty yards of the last year's nest. This I will refer to as pair number one.

The morning of April 20th was ushered in by such a balmy spring atmosphere that had the weather been a little inclement our prospects for Woodcock would have been more encouraging. On damp or cloudy days these birds often sally forth from their hiding places voluntarily. Moreover we worked with a feeling of uncertainty because there was such a vast amount of undergrowth, oak, hazel, and haw stretching before us, that it was quite evident we could cover but a small portion of the area. About noon my companion was plodding along in a half-discouraged manner when he came upon a sitting bird with four beauties under her, and toward the termination of our journey that day I secured another set of four from the last brush we encountered. It was dusk and the male was flying about preparatory to one of his aerial performances, consisting of an irregular ascent accompanied by a chirp and twitter, mingled with the whistling of wings, until a height of one hundred feet or more is attained, when the bird wheels about circling downward to alight precisely in the same spot from which he arose, which is apt to be within a few yards of the female.

My friend climbed through the brush and ascended the hill just in time to see the female leave her nest to feed, it being about time for her morning meal. In springing from her nest she caused the eggs to roll about rather vigorously for a few seconds. This I refer to as pair number two.

On April 24th, within a stone's throw of the nest found April 15th, I came across the remnants of four eggs just hatched. This nest was among fallen brush in a fence corner.

April 27th was preceded by a tremendous rainfall, and the Woodcock were working overtime feasting on angle worms. It was nearly 10 A. M. when we arrived on the preserves. From the appearance of a nest which



Woodcock (*Philohela minor*) on Nest

FROM PHOTOGRAPH BY ROBERT HEGNER

I located half an hour later, I estimated the eggs had been deposited about twenty-three days previously, and as the Woodcock hatches a brood in twenty-one days, what I got (or, rather, what I missed) can readily be guessed. One hundred and fifty yards farther through the timber I flushed a bird between two wagon tracks and found three fresh eggs. Thinking she was about to lay a fourth I withdrew from the spot for several hours, but she did not come back.

April 5th, 1903, was a cold day, and the snow still lay in shady places about the woods. We were on the breeding ground of pair number two, and no less than a dozen Woodcock were seen, but they did not appear mated. Some were flushed after we had tracked them through the snow for

twenty-five or thirty yards. On the 11th I revisited this place alone, and after hunting five hours, found an incomplete set of two, which I collected on the 13th, just one year after I had taken my first set.

Several weeks later, and in another district, I spied a young cotton-tail and endeavored to catch him. He led me to a brush pile, where I halted abruptly with one foot touching an incubating Woodcock. The nest held four eggs, and undoubtedly belonged to a bird whose former nest was broken up by the snow.

On April 19th we explored a small but extremely wild country densely covered with willows, sumach, alders and briers, an ideal spot for warblers. I was searching diligently when my companion summoned me to a little clearing surrounded on all sides by brush heaps. Chalkings were conspicuous



Nest of Woodcock (*Philophela minor*)

FROM PHOTOGRAPH BY ROBERT HEGNER

here, and so was Mrs. Woodcock after I had pointed her out, much to the disgust of the one who had called me to the spot! I stooped and stroked the bird for several minutes before she vacated her nest and revealed four eggs.

Late in the afternoon of April 29 I visited a favorite Woodcock resort, equally popular as a paradise for wild flowers at this season of the year. After dodging about for ten minutes in a patch of hackberry I confronted what appeared to be a pair of black beads sparkling in such an animated manner that I at once perceived a Woodcock was making "goo goo eyes"

at me. Fortunately a photographer was within hailing distance and, elated at the opportunity, he made an excellent series of photographs of the bird, nest and four eggs.

Meanwhile I was keeping a sharp watch on pair number one, and had called upon them at least five times, which was equivalent to twenty-five miles of walking with an additional one hundred miles by rail. In each instance I located both birds, and felt confident before withdrawing from the spot that nesting had not yet begun. Finally on May 6, I found a set of four perfectly fresh eggs in a clump of willows only a few rods from the two previous nesting sites of the same pair. I supposed the season had



Woodcock (*Philohela minor*) on Nest

FROM PHOTOGRAPH BY ROBERT HEGNER

terminated with this find, but on May 15 one of my acquaintances, while plowing his corn stubble, overturned a Woodcock, eggs and all, and failed to notice her until she fluttered out from under the sod as the next furrow was turned!

The temperature during April, 1904, was below normal, but the air was clear and bracing. Under such conditions the bird student requires no other inspiration than that afforded by the stimulating atmosphere. Many days were spent seeking the evasive Woodcock, until at twilight May 1st, I turned homeward feeling that I had enough for the season. Ten nests in all were found between April 10th and May 1st, besides several broods of young, with an average tramp of twenty-five miles for every nest. There

were six sets of four, two of three; another on the verge of hatching, and one destroyed by a forest fire.

I visited pair number two on the 18th, and found her sitting on only three eggs. The nest was two inches above the ground and rested on several willow limbs that grew almost parallel with the earth. She stuck closer than a wood-tick, and had to be lifted off her eggs, which she succeeded in covering again before I had time to say "boo."

April 21, between tree trunks, amidst a cluster of sumach, a Woodcock's bill projected beyond a little limb just enough to betray her presence. She was a nervous sitter and flushed before I could reach her. The last egg had just been laid, and what a set! One would have thought they had been



Woodcock (*Philophela minor*) on Nest

FROM PHOTOGRAPH BY ROBERT HEGNER

exposed to the weather for a year, and the shells turned a chocolate brown by the decayed leaves, after which the sumach berries had stained the larger halves of the eggs with crimson. The latter color mingled with a shade of violet that seemed to come from the blue flowers growing about the place. Like all other eggs of this species I have collected, these turned paler after blowing, but are still correspondingly darker than any other set I have.

May 1 was a delightful day, and migration had reached its zenith, yet the passing of the Woodcock season meant the termination of a fascinating epoch; all subsequent "finds" are tame. Such were my thoughts as I wandered reluctantly among some brier patches, when a diminutive cotton-tail attracted my attention. He was a mascot, and his presence foretold the

acquisition of another trophy. The period of anticipation was brief. I stood gazing intently at the little fellow, who returned my stare apparently with equal satisfaction. He was sitting motionless about fifteen feet away, but not until I had watched him for some minutes did I recognize the pale mottled plumage of a close sitting Woodcock, directly in my line of vision. The nest contained four buffy eggs, heavily blotched with red and lilac.

OBSERVATIONS ON THE NESTING HABITS OF A PAIR OF HOUSE WRENS.

BY MAX MINOR PEET.

On the first of May, 1904, the first pair of House Wrens made their appearance. After looking the neighborhood over carefully in quest of a good nesting site, they finally chose a box which I had placed on the trunk of a large, spreading apple tree. During the days previous to the selection of their home, they were usually together and were constantly on the move, peering into every nook and corner about the house and yard. Most of their time was spent within a few feet of the ground, but many times during the day the male would mount some high limb and there pour out his rippling, liquid notes. In fact, the first notice I had of their presence was one morning when I stepped to the door and was confronted with this wee little fellow sitting on the topmost limb of the apple tree, singing with all the energy his small body could muster. Their food consisted principally of small insects, larvae from the rose bushes, and numerous flies.

On the 17th of May, they began their nest, both the male and female working; the female did nearly all the building, the male simply bringing material. One of the birds was near the nest constantly and ready to scold any one intruding upon its sacred domain. The female worked diligently carrying twigs, feathers, and horsehair, but the male took frequent vacations in the upper branches of the apple tree, where he gave vent to his pent up feelings in bursts of beautiful song.

The nest was finished on May 22. The foundation consisted of large sticks varying from three to six inches in length and from one-sixteenth to three-sixteenth inch in diameter. Upon this solid foundation was built a firm mass of smaller twigs forming a rough cup at the farther end of the box. The bark from the grape vines was now brought into use and narrow strips of this were woven with a net work of slender roots into a compact cup about two inches deep. A few horsehairs were woven into the lining, the nest being completed by the addition of many small feathers.

Not until the 26th was an egg laid, but during this time and until the young left the nest one or the other of the birds was always near. An egg was laid each day, usually early in the morning, for six consecutive days. This set was of unusual beauty, the eggs being of uniform size and of varying color from the first egg laid, which was a dark chocolate, to the last one, which was very light brown speckled with small dark spots.

The female commenced setting on the day following the laying of the last egg (June 1). She only left the nest a few moments at a time to feed and then about nine in the morning and four in the afternoon. The male spent much of his time singing from his favorite perch on the apple tree, but also made frequent visits to the nest to see that all was well. He seldom fed her while she was sitting.

On June 12th four of the eggs hatched; on the next day one more opened, and on the following day the last baby was born. They were homely creatures, of a deep flesh color and naked, save for a very little down, which became evident on June 15th. By June 16th their bodies had turned black and the down was somewhat thicker. This was the first day on which they had shown strength enough to lift their heads for food. Both parents worked faithfully, bringing innumerable larvæ and small flies. One of the favorite morsels was a small green worm from the rose bushes.

One day a young Robin, not yet feathered out, fell from its nest, and I placed it in a berry box on the wren house. Both Wrens were greatly excited and tried to feed the unfortunate Robin. The female, holding a worm in her bill, would poise herself upon the edge of the basket and try to place it in the Robin's mouth. The result was ludicrous. The Robin being not yet strong enough to hold its head steady, and being very hungry, made frantic efforts to obtain the morsel, holding its head as high as possible, at the same time keeping its mouth wide open. Its head, supported by so weak a neck, swayed violently back and forth. The Wren leaning over the basket seemed afraid of falling into the yawning cavern presented by the young one. Each time the Robin threw its head in the direction of the Wren that little body would jerk backward as if from an electric shock. The Wrens kept at their self imposed duty for more than half an hour, but were unable to place a single morsel in the open mouth. The Robin was now taken away amid the earnest protests of the foster parents.

The young Wrens were fed, on an average, once every five minutes during the entire day. When partly feathered out one died, but was not removed from the nest although it was still small enough to have been easily lifted out by the parents. They were nearly feathered by the 23d, and spent most of their time eating and sleeping. They were now fed even oftener than before and were able to eat entire insects, the green worms from the rose, and spiders, forming their favorite food.

On June 28th, amidst a great deal of excitement, the brood left the nest. At first they were guided about the lower limbs of a nearby plum tree, and after gaining more courage they made a complete tour of the trees in the yard. At the approach of any one, great anger and distress was shown by the parents, who scolded and fretted trying to drive one away. They were full of courage and felt perfectly competent to protect their little ones. The male had little time for singing now, he being usually followed by a string of two or three little fellows constantly crying for food. The brood did not return to the nest the first night nor any night thereafter, though they remained in the vicinity till fall.

The year before this the pair had nested in an old pump near the house, and had learned to trust us to the extent that we could view the eggs without protest, but when the young were hatched we were always confronted by an angry parent. No other birds alighted near the nest without creating a disturbance. This year, however, they were not so domineering. A Robin nested in the same tree within ten feet of the Wren house, while a Thrush and a pair of Ovenbirds fed near the nest without causing any disturbance.

Ypsilanti, Mich.

BIRDS NOTED EN ROUTE TO NORTHERN MICHIGAN.

NORMAN A. WOOD.

[From the University Museum, University of Michigan.]

The past summer of 1904 was a fortunate one for the University Museum, as it was able to send a party to Northern Michigan to study and collect natural history specimens. While on the way some observations were made upon the bird life by Otto McCreary, Max M. Peet, and the writer, but as those records are widely scattered it was thought best to present them in this form. A detailed report of the ornithological results is being prepared and will be published elsewhere. Many birds were seen that could not be identified with certainty from the train; so all of doubtful identity have been omitted. The return was made mostly at night, which accounts for the small number of records made on the return trip.

The party left Ann Arbor July 10, and at Detroit on that evening observed the Nighthawk and a few Herring Gulls circling over Detroit River. During the night we left Detroit for Mackinac City on the Michigan Central R. R. Long before daylight we had passed through the deciduous forests of southern Michigan, and were among the coniferous forests near Grayling, Crawford County. This is a region of high sandy hills and Jack Pine plains covered with pine stumps and burnt stubs—the remnants of a once extensive pine forest. Here we saw a Red-tailed Hawk, four Crows, two Kingbirds and Robins. At Waters, Otsego County, we saw a small flock of Tree Swallows (flying over the water), the Flicker, and Hairy and Downy Woodpeckers.

At Otsego Lake we saw a Great Blue Heron. At Gaylord, Otsego Co., a Meadowlark (not a common bird in this high sandy country), and at Vanderbilt, also in Otsego Co., we saw the Bronzed Grackle. At Wolverine, Cheboygan Co., we saw the Chimney Swift. At Topinabee the railroad runs near the shore of Mullet Lake, and here we saw the Spotted Sandpiper, Phoebe, and Red-winged Blackbird. Here I met a young man named Glen Riley, who lives near Onaway, Presque Isle Co., (about 25 miles southeast of Mullet Lake). Mr. Riley said the Meadowlark, Bobolink, Baltimore Oriole, and Scarlet Tanager were regular summer residents, and that the Bob-white had arrived there a few years ago. At Mackinac City and on the Straits we saw the Herring Gulls as at Detroit.

Leaving St. Ignace on the Duluth, South Shore and Atlantic R. R., we passed through an area of cultivated land, and gradually entered a level, swampy tract. It was in this region, on our return, that the Spruce Partridge was seen. Here were miles of marshes covered with a short, thin growth of coarse grass in patches tall enough for hay. A scattered growth of small tamarack and spruce trees occupied the edges of the marshes, while upon the dryer ones quite extensive forests were seen. Here the only bird identified was the Great Blue Heron, near the Soo Junction in Luce Co.

Passing from Luce into Schoolcraft County we find that marshes occupy most of the region traversed. These are gradually replaced by a mixed forest of birch and spruce, with some pine and hemlock. The hills and ridges are covered with forests of hard maple. At Seney, on our return, a Meadowlark was seen—the most northern point at which we observed this bird. Near here, also on our return, we saw twelve Great Horned Owls in flocks or

families of four. These were flushed from the meadows early in the morning at the approach of the train, and no doubt were foraging. At Shingleton, Schoolcraft County, we saw a Red-headed Woodpecker—the only one seen. In Alger County the sandy plains were a feature not seen since we left the Lower Peninsula. Here the timber had been cut and fires had cleared them still more, leaving only a small second growth of aspen and oak. But few birds were seen: the Blue Jay, Goldfinch, and White-throated Sparrow.

Passing into Marquette County and nearing the Lake Superior shore, the country was higher and ledges of rock appeared, giving this part of the State a broken appearance. Marquette is built on high, rocky bluffs on the shore of Lake Superior. Here we stopped for a few hours. While here we saw the Barn Swallow; Song, Chipping and White-throated Sparrows; Robin, Crow, Cedar Waxwing, Northern Yellow-throat, Junco, Tree Swallow, Goldfinch, Herring Gull and also the English Sparrow.

Leaving Marquette the grade increases for several miles until the top of the ridge is gained; then it descends to the end of L'Anse Bay. This part of Michigan is rugged and rocky, and the tops of the ridges and cliffs are bare. The ravines and the sides of the ridges are covered with a coniferous forest, while on the lower ground and along the streams, cedar and tamarack swamps were seen. Near Marquette we saw a Vesper Sparrow, and near a stream a Kingfisher; at Ishpeming a Sparrow Hawk, and a Great Blue Heron at Michigamme Lake. We also saw a Long-billed Marsh Wren, Sparrow Hawk, Robin and House Wren at L'Anse, Baraga County. We saw Blue Jays, Barn Swallows, Kingbird, Kingfisher, Herring Gull, (and on our return) the Spotted Sandpiper along the shore of the Bay. At Baraga we saw Barn Swallows, and at Keweenaw Bay, we found the Goldfinch, Song Sparrow, Bluebird and Cedar Waxwing. The two latter were building nests. Leaving Keweenaw Bay, on the Mineral Range R. R., we find the same conditions until we cross the Copper Range, and near the shore of Lake Superior at Ontonagon, where we again find the sandy plains. At Spruce River we saw a Phoebe, Sparrow Hawk and Chimney Swift.

We arrived at Ontonagon July 12. Just north of town was an alder swamp in which were seen numerous specimens of Song Sparrow, Junco, Goldfinch, a Red-eyed Vireo and Robins. Near by in a thicket of arbor vitae and hemlock, a male Magnolia Warbler was seen and heard singing. A female Redstart as well as the Vesper and Chipping Sparrows were seen here also. In a small wood near by were heard the White-throated Sparrow, Wood Pewee and Hermit Thrush; while near the shore of the lake were seen a flock of Crows, and out over the lake the Herring Gull. In the town were seen the House Wren, Chimney Swift, Nighthawk and Sparrow Hawk.

From Ontonagon early in the morning of August 15, we took the steamer for Hancock. At the dock we counted over ninety adult and young Herring Gulls standing on one end of the breakwater. Among them we observed a few Common Terns. All but two of these birds flew up at the near approach of the steamer, and circled in the air or rested upon the water a short distance away. While on the way to Hancock two Loons flew over the steamer; also numbers of Gulls. While going down the canal to Hancock we saw the gulls and some species of grebe. Here also on our return, September 5, we saw a flock composed of hundreds of Crows. While we watched them they

alighted upon an old meadow and seemed to be picking up something from the ground.

At 10 a. m. we arrived at Hancock, where we took the Isle Royale steamer. Here we saw the English Sparrow and the Herring Gull. On the morning of August 16, at Washington Island, we saw the American Merganser. Here on our return, September 5, I saw the Bay-breasted Warbler, the Tennessee Warbler, the Golden-crowned Kinglet and the Hermit Thrush, also the Junco and Sparrow Hawk. I give a list of the fifty-one species of birds observed en route. The six species marked with a star were not seen at the Porcupine Mountains or on Isle Royale.

- 1.—Loon—*Gavia imber*.
- 2.—Herring Gull—*Larus argentatus*.
- *3.—Common Tern—*Sterna hirundo*.
- 4.—Merganser—*Merganser americanus*.
- 5.—Great Blue Heron—*Ardea herodias*.
- 6.—Spotted Sandpiper—*Actitis macularia*.
- *7.—Bob-white—*Colinus virginianus*.
- *8.—Canadian Spruce Grouse—*Canachites canadensis canadensis*.
- 9.—Red-tailed Hawk—*Buteo borealis*.
- 10.—Sparrow Hawk—*Falco sparverius*.
- 11.—Great Horned Owl—*Bubo virginianus*.
- 12.—Kingfisher—*Ceryle alcyon*.
- 13.—Hairy Woodpecker—*Dryobates villosus*.
- 14.—Downy Woodpecker—*Dryobates pubescens medianus*.
- *15.—Red-headed Woodpecker—*Melanerpes erythrocephalus*.
- 16.—Northern Flicker—*Colaptes auratus luteus*.
- 17.—Nighthawk—*Chordeiles virginianus*.
- 18.—Chimney Swift—*Chaetura pelagica*.
- 19.—Kingbird—*Tyrannus tyrannus*.
- 20.—Phoebe—*Sayornis phoebe*.
- 21.—Wood Pewee—*Contopus virens*.
- 22.—Blue Jay—*Cyanocitta cristata*.
- 23.—Crow—*Corvus brachyrhynchos*.
- *24.—Bobolink—*Dolichonyx oryzivorus*.
- 25.—Red-winged Blackbird—*Agelaius phoeniceus*.
- 26.—Meadowlark—*Sturnella magna*.
- *27.—Baltimore Oriole—*Icterus galbula*.
- 28.—Bronzed Grackle—*Quiscalus quiscula aeneus*.
- 29.—Goldfinch—*Astragalinus tristis*.
- 30.—Vesper Sparrow—*Proœcetes gramineus*.
- 31.—White-throated Sparrow—*Zonotrichia albicollis*.
- 32.—Chipping Sparrow—*Spizella socialis*.
- 33.—Slate-colored Junco—*Junco hyemalis*.
- 34.—Song Sparrow—*Melospiza cinerea melodia*.
- 35.—Scarlet Tanager—*Piranga erythromelas*.
- 36.—Barn Swallow—*Hirundo erythrogastra*.
- 37.—Tree Swallow—*Iridoprocne bicolor*.
- 38.—Cedar Waxwing—*Ampelis cedrorum*.
- 39.—Red-eyed Vireo—*Vireo olivaceus*.

- 40.—Tennessee Warbler—*Helminthophila peregrina*.
- 41.—Magnolia Warbler—*Dendroica maculosa*.
- 42.—Bay-breasted Warbler—*Dendroica castanea*.
- 43.—Northern Yellow-throat—*Geothlypis trichas brachidactyla*.
- 44.—Redstart—*Setophaga ruticilla*.
- 45.—House Wren—*Troglodytes aedon*.
- 46.—Long-billed Marsh Wren—*Telmatodytes palustris*.
- 47.—Golden-crowned Kinglet—*Regulus satrapa*.
- 48.—Hermit Thrush—*Hylocichla guttata pallasii*.
- 49.—Robin—*Merula migratoria*.
- 50.—Bluebird—*Sialia sialis*.
- 51.—English Sparrow—*Passer domesticus*.

NOTES FROM THE FIELD.

LATE CANADA GEESE.

On April 30th, while working the vast stretch of meadows bordering Lake St. Clair, St. Clair County, P. A. Taverner and I saw a flock of some large birds alight in the fields some distance away. Upon investigation we were somewhat surprised to see a flock of twenty-one Canada Geese feeding here. These loomed up very large from amidst the short grass. Upon our approach the flock rose in the air and, after considerable circling, went north over Dickinson's Island. Personally I have never seen this species at this late date. Generally they do not remain to feed during the spring.

BRADSHAW H. SWALES.

WARBLER DAY.

May 2nd seems to have been Warbler day in S. E. Michigan this year. See N. A. Wood's account of warblers on that date at Ann Arbor in this issue. This same day Mr. B. H. Swales noted an unusual abundance of these birds on Belle Isle, Wayne County. Nearly all the birds listed by Mr. Wood were present on the island this day, and in very unusual numbers. Apparently the crest of a great migration wave struck this vicinity then, and it would be interesting to hear how general this movement was and how long it persisted in its wave-like form.

AN INTERESTING JUNCO.

April 30 I took a late Junco near Pearl Beach, St. Clair County. The great mass of this species left here some time ago. The last Junco previous was noted April 9. The interest in this bird was heightened upon dissection, when it proved to be not only abnormally fat, but of no ascertainable sex. Birds at this season should be easily sexed, but with a strong magnifying glass I could recognize no sexual organs at all. This case indicates the close correlation between sexual and migratory instincts, for here we find incomplete sexuality accompanied by incomplete migration. It also shows the danger of jumping at conclusions and founding a breeding record on a bird's appearance in an unusual vicinity during the nidification season.

Detroit, Mich.

P. A. TAVERNER.

ROUGH WINGED SWALLOW.

May 7 Mr. B. H. Swales and myself discovered a small colony of about six individuals of Rough-winged Swallows excavating the banks of the Huron River, in Wayne County. Mr. Saunders, of London, Ont., tells us that this species is really not as rare as is generally supposed in his locality, and that nearly every colony of Bank Swallows has a few Rough-wings amongst them. It is quite possible that this species may prove the same way here. In life it is so difficult to separate the two species that the Rough-wings are very apt to escape notice. It is a good idea to scrutinize all flocks of Bank Swallows closely. The Rough-winged Swallow is a little larger than the other. It is said also that the entrance to its nest is round instead of being oval like that of the Bank Swallow.

P. A. TAVERNER.

PINE SISKIN IN WELLINGTON COUNTY, ONT.

May 7th, 1905. Have just taken a nest of Pine Siskins from a tall balsam in a grove near this city. Nest contained two eggs of Siskin and two of Cowbird. It was placed in the little clump of small branches and twigs at the end of a horizontal limb about twenty-five feet from the ground. This is the first nest of this species that I know of from this locality.

Guelph, Ont.

F. NORMAN BEATTIE.

Mr. A. B. Klugh, of Guelph, informs me that he has seen several pairs of Siskins in same locality as above carrying nesting material and thinks it probable that a number are breeding there.

P. A. TAVERNER.

KIRTLAND'S WARBLER.

Early in the morning of May 6 Mr. R. A. Brown and Mr. Wood were at the "Overflow," along the Huron River, when to their surprise they heard the song of this bird, with which both were familiar. Mr. Brown entered the willow swamp in search of the singer, and approached near enough to identify it as an adult male of Kirtland's Warbler. Both observers are familiar with the bird in its summer home, so that there can be no doubt as to the identity of the bird. This is the second male and the fifth bird recorded from the vicinity of Ann Arbor, and eight days earlier than the previous records.

Ann Arbor, Mich.

N. A. WOOD.

PERSONAL NOTES.

The Great Lakes region will be represented at the International Ornithologists' Congress to be held early this summer in England, by Mr. J. H. Fleming, of London, Ont. Mr. Fleming sails in company with Dr. Jonathan Dwight, Jr., May 26th, on one of the new turbine steamers, via Gulf of St. Lawrence, which at this season of the year is unrivaled for observing water birds—fog permitting. Mr. and Mrs. Frank Chapman are scheduled to leave on the 13th, together with Otto Widmann and wife. Among the treats not on the official programme which Mr. Fleming is to enjoy is a visit to Boulder Sharpe's country place in the vicinity of Selbourne—the Selbourne made classical by White and his best beloved of natural histories.

AN UNUSUAL BIRD WAVE.

N. A. WOOD AND OTTO M'CREARY.

[From the University Museum, University of Michigan.]

On Tuesday, May 2, 1905, the bird observers of Ann Arbor were surprised by the sudden appearance of a large number of warblers and other birds. These birds must have arrived Monday night, as no new arrivals had been reported on the preceding day. It is usually counted a very good day, in this locality, if ten or twelve first arrivals are reported, but the present wave brought 22 species. This is the largest number reported for any one day during 25 years of records.

Most of these birds were seen among large maples and elm trees, and along a hedge of large evergreens, upon the campus of the University, and within a few rods of the University Museum. The maples were just leafing out. Between 7 and 8 A. M. we observed 30 species of birds in this restricted area, and it would have been difficult to estimate the number of individuals of some species.

This wave was doubtless caused by peculiar weather conditions. It was quite cool Sunday night, as ice was observed upon pools of water early Monday morning. But Monday night a south wind and a light rain apparently produced the favorable conditions that resulted in this remarkable wave.

The following is the list of the first arrivals, with the earliest date recorded for this vicinity, and the average date, as based on 25 years of records.

NAME.	EARLIEST DATE.	AVERAGE.
1. Oven Bird.....	April 28, 1900...	May, 1st week
2. Wilson's Thrush.....	April 16, 1889...	April, 4th week
3. Yellow-throated Vireo.....	April 22, 1896...	May, 1st week.
4. Blue-headed Vireo.....	May 4, 1900.....	May 11.
5. Warbling Vireo.....	April 5, 1897.....	April 28.
6. Woodcock	March 10, 1897.....	March 22.
7. Red-eyed Vireo.....	April 12, 1902.....	May 6.
8. Olive-backed Thrush.....	April 22, 1900.....	May 3.
9. Virginia Rail.....	May 5, 1880.....	May 9.
10. Scarlet Tanager.....	April 11, 1886.....	May 8.
11. Blackburnian Warbler.....	May 2, 1882.....	May 8.
12. Cerulean Warbler	April 30, 1888.....	May 12.
13. Black-throated Blue Warbler.....	May, 3, 1904.....	May 6.
14. Tennessee Warbler.....	May 4, 1904.....	May 10.
15. Nashville Warbler.....	May 2, 1900.....	May 9.
16. Chestnut-sided Warbler.....	April 27, 1889.....	May 11.
17. Redstart	April 5, 1903.....	May 6.
18. Parula Warbler	May 7, 1903.....	May 11.
19. Magnolia Warbler.....	May 4, 1902.....	May 9.
20. Golden-winged Warbler.....	May 4, 1902.....	May 10.
21. Palm Warbler.....	April 26, 1888.....	May 3.
22. Prairie Warbler.....	May 9, 1903.....	May 10.

Fourteen of these species were seen on the campus and the remainder in or near the city. The Woodcock was not observed in this vicinity until Tuesday, but it probably had been here for at least a month.

On a ridge south of the Huron River, at Schoolgirl's Glen, we found three Prairie Warblers. This is a very rare bird and irregular in its occurrence here. This record is seven days earlier than previously recorded. The Palm and Golden-winged Warblers, and also the Woodcock were observed at the Glen.

The Virginia Rail was seen at the "Overflow," along the Huron River, by Misses Hays and Parnell. The Scarlet Tanager was seen in the west part of the city by Miss Vrooman.

All day Tuesday the birds lingered about the campus, where they were observed as late as 6 P. M. feeding in the tops of the trees. But the south warm winds continued through the night, so that they were nearly all gone by 4 A. M. on Wednesday, when again in the field.

On Wednesday there were very few birds on the campus, only ten species were counted, and even in the fields there were fewer birds than on Tuesday. The following new arrivals were observed:

NAME.	EARLIEST DATE.	AVERAGE.
Crested Flycatcher	April 19, 1896.....	May 7.
Carolina Rail.....	April 19, 1899.....	May 1.
Bay-breasted Warbler.....	May 10, 1903.....	May 13.

TWO BIRD PICTURES.

During the last fifty years some species of Michigan birds have become very rare or entirely extinct, while others have greatly increased with the clearing and settlement of the country. Among the species illustrating the latter fact we have a striking example in the Rose-breasted Grosbeak. Our picture (see frontispiece) is from a mounted specimen of a male in breeding plumage, and gives a good idea of the proportions and color pattern, although the half-tone gives only a hint of the beautiful rose color which adorns the breast and under wing-coverts. This bird is now very generally distributed over the state, although it is most common in the Lower Peninsula, and probably reaches its greatest abundance in the middle tiers of counties. During the early history of the state it seems to have been far from common, but has steadily increased in spite of the enemies whose multiplication commonly keeps pace with that of the human population.

The Sandhill Crane whose head is shown in the accompanying picture affords a melancholy illustration of the fact that an abundant species may be almost exterminated by the advance of civilization. This beautiful bird formerly occurred in large numbers over nearly the whole of the untimbered portions of Michigan, but has steadily decreased in numbers, and with fearful rapidity during the last decade. Ten years ago it was a common bird in the marshes of Ingham and surrounding counties, and nested regularly in favorable places in this region. Its resonant voice could be heard daily as the birds passed to or from their feeding grounds, and their striking forms were noteworthy objects as they passed in files of three to ten through the upper air during their spring and autumn migrations. At present few if any are left in this region, and for the past two years the writer has not even heard their voice. The facts that the bird is large enough to make a tempting mark for the rifleman and that its flesh is excellent for the table, undoubtedly have contributed to its disappearance. It nests habitually in marshy tracts



Sandhill Crane (*Grus mexicana*)

FROM SPECIMEN IN MUSEUM OF MICH. AGRICULTURAL COLLEGE

which are not readily accessible, but as it feeds largely on the uplands and in cultivated grounds it runs many risks which smaller and less attractive species avoid. This bird is generally confounded with the so-called "Blue Crane" or Great Blue Heron, which is not a crane at all but merely our largest species of heron. The latter bird nests almost invariably in colonies, building bulky nests of sticks in the tops of tall trees in the swamps, and laying four or five blue unspotted eggs, whereas the Sandhill Crane places its nest on the ground and lays but two eggs which are always mottled and spotted.

The cuts from which these pictures are printed were loaned by the Agricultural College and are from the forthcoming bulletin on the birds of the state which has been so long in preparation and may still be delayed for several months.

Bulletin
OF THE
Michigan Ornithological Club

A QUARTERLY MAGAZINE DEVOTED TO THE ORNITHOLOGY
OF THE GREAT LAKE REGION.

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THE BIRD MAGAZINES.

The January *Auk* is particularly interesting to Michigan readers from the fact that it contains a long article on the Birds of the Au Sable Valley, by Norman A. Wood and Earl H. Frothingham. Additional interest centers around this list because it relates to the region now known to be the summer home of Kirtland's Warbler. Among other papers of particular interest three stand out with prominence: Routes of Migration, by W. W. Cooke; Decrease of Certain Birds in New England, by E. H. Forbush; and Regurgitative Feeding of Nestlings, by Irene G. Wheelock. The number also contains the Secretary's report of the Twenty-second Congress of the American Ornithologists' Union, and there are several notes on the capture of rare species in Michigan.

The April *Auk* is noteworthy for two papers in addition to Mr. Norman A. Wood's paper on New and Rare Bird Records for Michigan. One of these papers, on the Migration of Certain Shore Birds, is reviewed at some length elsewhere in this Bulletin. The other paper is the Nesting of the Golden Eagle in Montana, by E. S. Cameron, illustrated by four excellent half-tones.

Bird Lore for March-April is rich in interesting notes and pictures for the bird lover. It opens with a paper by T. Gilbert Pearson on the Cormorants of Great Lake, North Carolina, giving striking half-tones of a large nesting colony of the Florida Cormorant in the cypress trees of this Carolina lake. There is also another finely illustrated paper, on the Chimney Swift, by Guy A. Bailey, showing young and old swifts in and out of the nest, which in this case was located on the inside of the gable of a barn, so that the photographs were taken by flashlight. The excellent series of papers on the Migration of Warblers by W. W. Cooke is continued, the colored plate, which is beyond criticism, representing the Connecticut and Kentucky warblers. Otto Widmann suggests the Hummingbird as a representative species for a

seal of the National Association of Audubon Societies. He truthfully remarks that Hummingbirds are exclusively American, universally known, everywhere popular, justly admired for beauty and behavior, and fit subjects for protection everywhere. We heartily endorse his suggestion.

The April number of *American Ornithology* has much to commend it to the bird lover as well as some points of merit for the youngest students. The pictures of a Bluebird feeding the young, and a pair of Bluebirds at their nest in a fence post are exceptionally good, as is also a half-tone of the nest and eggs of the Magnolia Warbler. The colored plate illustrating six species of warblers is far from good, but the pictures of the males at least can hardly be mistaken, and colored pictures of any kind are usually helpful to beginners.

W. B. B.

ONTARIO NATURAL SCIENCE BULLETIN.

The first number of the Wellington Field Naturalists' Club annual Bulletin was published April 15. Though the club covers in its work a wider field than ornithology alone, there are some interesting papers on birds in this number. The most important contribution is a list of Birds of Wellington Co., Ont., by A. B. Klugh. After a brief description of the physical features of the county, Mr. Klugh lists 197 species as migrant, resident or accidental, giving their various degrees of commonness. It is to be regretted perhaps that the author has not given us a few more dates, but the whole is most creditable. One of the features of the paper is the author's attacks upon the practice of forming subspecies upon slight points of variation.

Mr. J. H. Fleming gives us under the heading of An Unusual Migration of the Canada Jay, all available data upon the unusual occurrence of that bird in Ontario last fall. This is of peculiar interest to us in this section in showing the independence of the Ontario migrations with our section, for though the movement seemed very general in the Province, we received no indication of anything unusual in our state.

The Origin of Kirtland's Warbler is a speculative paper by P. A. Taverner.

Rev. J. C. Young gives us an account of the Thrushes of Ontario and a migration report for the year 1904-05 in tabular form finishes the ornithological papers. The remainder of the volume is given to mammalogy and botany, but under the head of Notes we find many field observations on birds of interest. The Wellington Field Naturalists' Club shows what a small coterie of active and enthusiastic workers can do and how valuable are local organizations of this kind.

P. A. T.

THE INTERNATIONAL ORNITHOLOGICAL CONGRESS.

The Fourth International Ornithological Congress will be held in London, England, Monday, June 12th to 17th. The meetings will be held at the Imperial Institute, South Kensington. Besides the regular meetings of the sections the following events are provided for in the preliminary programme.

June 15—Congress will be the guests of the Hon. Walter Rothschild.

June 15—Afternoon—Reception by the Right Hon. the Lord Mayor of London at the Mansion House. Evening—Dinner given by the British Ornithologists' Union.

June 20—Excursion to Cambridge. Prof. Newton will welcome the members of the Congress and luncheon will be served at Magdalene College.

H. R. H. the Prince of Wales is down as Patron with H. R. H. Prince Ferdinand of Bulgaria and Alfred Russell Wallace as Honorary Presidents and R. Bowlder Sharpe as President-Elect.

Among the general Committees, Canada is represented by Mr. J. H. Fleming, of Toronto, and the United States by J. A. Allen, Frank M. Chapman, D. G. Elliott, Chas. W. Richmond, Robt. Ridgway and Leonhard Stejneger.

It is to be regretted that all of the Committee members from this country will not attend in person. One of the great causes of disagreement between our systematists and those abroad seems to be lack of personal contact between them. More intercommunciation would perhaps broaden both bodies and help to reconcile the discrepancies and antagonisms between our A. O. U. Check List and the British Museum Catalogue which so worry the curators of general collections.

A NEW FACTOR IN MIGRATION.

The April *Auk* has an interesting article by Austin H. Clark, in which a new theory is propounded as to the route taken in migration by certain shore birds, among which Mr. Clark cites the Golden Plover as a typical example. It is well known that this species on its southward migration leaves the main land of the North American continent at Labrador or Nova Scotia, and moves southeastward in large flocks over the western Atlantic, over or past Bermuda, eventually reaching the northern coast of South America in the Guianas and northern Brazil. Here the Plover disappear but later are found on the Argentine Pampas and the plains of Patagonia, where they spend most of the winter. Returning, they seem never to follow the route by which they came, but travel northwestwardly to the eastern slope of the Andes, thence north to Panama and Central America, ascending the Mississippi Valley to Manitoba and thence moving northwestward to their principal breeding grounds in Alaska and Arctic America. After nesting, they, or many of them, move southeastwardly to Labrador, where they arrive early in August and remain for two or three weeks fattening on "crow berries" or "curlew berries (*Empetrum nigrum*), etc., and then taking the sea route for South America again.

In brief, Mr. Clark's claim is that these birds when migrating always prefer to fly on a "beam wind," that is, in a line at right angles to the direction of the wind, or as a sailor would say, "on the wind." This statement is based apparently on the observations of Sir Robert H. Schomburgk in 1848, in regard to the migration of shore birds over the island of Barbados, and of Col. H. W. Feilden writing of the migrants of the same region in 1889 and 1902, supplemented by the later observations of others, including those of Mr. Clark himself. Applying the theory of flight always at right angles to the prevailing wind Mr. Clark shows how completely the theory fits the observed facts. The southeasterly course of the Golden Plover is at first at right angles to the general westerly and southwesterly winds of the temperate zone, which brings the birds from Labrador to Bermuda, or a little

to the eastward of these islands, when the light easterly winds of the horse latitudes, and later the increasing northeast trades, bring them to the South American coast. There is a gap in our knowledge of the route from Brazil to the Pampas, but as the prevailing winds in the southern tropics are from the east and southeast, and in the south temperate zone from the west, the southerly direction may be safely assumed. In late winter and early spring the prevailing winds of the Argentine Pampas are from the southwest, which would shape the course of the Plover northwest to the eastern slopes of the Andes, along which they would pass in a generally northward course (still *across* the southeast trades and easterly equatorial winds), crossing the Isthmus of Panama, traversing Central America and ascending the Mississippi Valley, always moving approximately at right angles to the prevailing wind; and their course from Manitoba to their breeding grounds in Alaska is again nearly at right angles to the prevailing westerly winds.

This theory is one of the most attractive and suggestive which has been put forward in recent years, and it explains almost completely the hitherto rather mysterious course of plover, curlew and related shore birds which are known to take an easterly path in going south and a much more westerly one during the northward migration in spring. It remains to be seen how far this factor of migration on a "beam wind" may enter into the migration courses of species other than shore birds. One naturally thinks at once of the great southeastward movement of the Bobolinks and Blackbirds of the Mississippi Valley across the lower Alleghenies to the rice-fields and other feeding grounds of the South Atlantic and Gulf coasts. The whole fabric rests on a foundation of observed facts, which as yet, however, is not very strongly established. Is it a fact that migrating birds prefer to fly across the direction of the wind? If the answer to this question is unanimously affirmative a new and vastly important factor in bird migration will have been established. But whatever the result may be, Mr. Clark is to be commended for having called attention to a very important matter which has been generally overlooked heretofore.

W. B. B.



MICHIGAN AUDUBON SOCIETY

(Organized February 27, 1904)

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The most interesting event to the protectionists during the present season was the visit of Mr. Wm. Dutcher, of New York City, who was recently elected national president of the Audubon Societies. Mr. Dutcher was given a hearing by the joint game committees of the house and senate at Lansing in regard to the advisability of adopting the model law. The writer presented a bill to Senator S. C. Traver and Representative J. E. Bland, both of whom introduced the same. Dr. Palmer, of the Biological Survey of the U. S. Dept. of Agriculture, asked for a copy and made a few interlineations. Mr. Dutcher and Professor Barrows went over the bill and agreed upon further changes. The Audubon Society asked for the appointing of four deputy wardens with compensation at \$350 yearly. The legislative committee would not agree to any appropriation, whereupon Mr. Dutcher agreed to stand this expense through the national society, provided the Michigan society was given the privilege of appointing the four deputies and the law should so read that the Game Wardens must remove such deputies upon complaint of the Audubon society. The Michigan society is to be incorporated and give bonds for one thousand dollars.

Under the bill as proposed the taking of non-game birds or the collecting of eggs is prohibited, except for scientific purposes. A board consisting of three, to be appointed by the University of Michigan and the Michigan Agricultural College, will have the granting of licenses, which licenses shall be allowed upon the recommendation of two reputable ornithologists. The licenses are to be granted yearly, for which a fee of one dollar is to be charged.

The thanks of the Audubonists are due Prof. W. B. Barrows for his interest in our bill, as well as W. B. Mershon, of Saginaw, and many others.

Our bill is offered in two forms, first as a separate bill and, second, as an amendment to the bill of Senator Baird, which includes the regulations in regard to fish and game. Mr. Dutcher spent the greater portion of a day inserting the amendments in their proper places, and lectured in the evening to an audience of five hundred at the Museum of Art.

A. B. Covert, of Ann Arbor, gave us some active work in the field, and it is possible that we may have Mr. Henry Oldys, of the Biological Survey, of Washington, D. C., later in the season. In any event, we will plan for two or three outings during the spring migration.

JEFFERSON BUTLER,
Sec. and Treas.

MINUTES OF CLUB MEETINGS.

The first quarterly meeting for 1905 was held at the Detroit Museum of Art on March 3, Dr. P. E. Moody in the chair. Eleven members present. The following papers were read: "An Addition to the Detroit Museum of Art," C. H. Burroughs (read by the chairman in the absence of the author); "The Red Squirrel in its Relation to Birds," J. Claire Wood; "Notes from Plymouth," James B. Purdy. A. W. Blain, Jr., gave a preliminary notice of a new use for heron tendons.

A short session followed. Leon J. Cole was appointed a committee to prepare resolutions on the death of A. B. Durfee, to be presented at the Annual Meeting.

Messrs. Blain and Wisner offered their resignations as editor-in-chief and business manager of the *Bulletin* respectively. Professor Walter B. Barrows was elected editor-in-chief and Frederick C. Hubel, business manager, to fill vacant offices.

The following persons were elected members of the society: Frank L. Burns, Thomas Potter, M. D., James J. Walsh, and Norman Chamberlin.

J. WILBUR KAY,
Secretary *pro tem*.

The Annual Meeting was held in the University Museum of the University of Michigan at Ann Arbor on April 1. A business session was held in the forenoon in the curator's office. The meeting was called to order by President Barrows.

After the reports of officers the election of officers for 1905-6 was held. The following were elected: President, Walter B. Barrows; Vice-Presidents, A. H. Griffith, James B. Purdy and J. Claire Wood; Secretary, A. W. Blain, Jr.; Treasurer and Business Manager of the *Bulletin*, Frederick C. Hubel. W. B. Barrows was made editor of the *Bulletin*, with P. A. Taverner and Norman A. Wood associate editors. The following were elected members of the club: H. P. Holt, Toledo, Ohio; L. H. Wood, Kalamazoo, Mich.; Gertrude A. Gilmore, Detroit; Frank C. Teal, Detroit; Jesse J. Myers, Agricultural College.

The afternoon session was held in the Museum lecture room, and was devoted to the reading of papers. The meeting was called to order by Professor Barrows, who addressed the society on "Recent Advances in Ornithology." The following program was then presented:

1. "In Memoriam, Albert Bowen Durfee," Leon J. Cole. (Read by J. Wilbur Kay, in the absence of the author.) The following resolutions were adopted by the Club:

"Whereas, In the death of Albert Bowen Durfee there has been lost to Michigan ornithology one of its most enthusiastic observers and ardent lovers of nature, and to the Michigan Ornithological Club one who was instrumental in its founding and who ably served as its first president; and

"Whereas, In his friendship and help those of us who knew him personally gained inspiration for our work and respect for a character that was high-minded, honest and true, be it therefore

"Resolved, That we, as members of the Michigan Ornithological Club, through these resolutions convey our sincere sympathy to the family of the

departed and pay a tribute to one who has aided in a real though unostentatious way in the progress of ornithological study in the state; and, moreover, be it further

"*Resolved*, That the secretary be instructed to send a copy of these resolutions to the bereaved family and publish same in the *Bulletin* of the Club."

2. Birds Noted en route to Northern Michigan, Norman A. Wood. Remarks by the chair, A. B. Covert and the author.

3. Ecological Distribution of the Birds of the Porcupine Mountains, Michigan, Otto McCreary.

4. Observations on the Nesting Habits of a Pair of House Wrens, Max M. Peet. Remarks by A. W. Blain, Jr.

5. On the Use in Surgery of Tendons of the Ardeidæ and Gruidæ, A. W. Blain, Jr. Remarks by Norman A. Wood and the author.

6. Some New and Rare Records for Michigan, Norman A. Wood. Discussion on the occurrence of the Thick-billed Blackbird, by A. B. Covert, P. A. Taverner and the author.

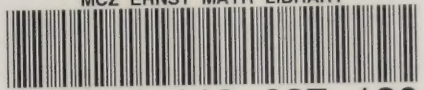
7. A List of Birds from the Michigan Forest Reserve, Crawford County. Earl H. Frothingham.

8. The Occurrence of Bewick's Wren, *Thryomanes bewickii*, (Aud.) at Grand Rapids, Leon J. Cole. (Read by Wm. H. Dunham.) Remarks by A. B. Covert.

9. An Interesting Migration Route, P. A. Taverner. Remarks by Chas. C. Adams, A. B. Covert and the author.

The meeting adjourned to meet at the Detroit Museum of Art on June 3.

ALEXANDER W. BLAIN, JR.,
Secretary.



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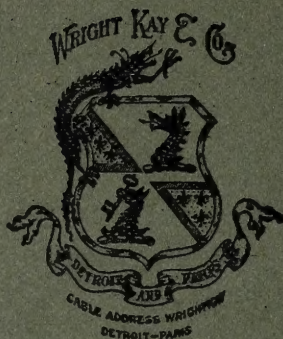
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